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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/712,060

11/14/2003

David G. Frank

9351-217

9055

1059

7590

04/27/2007

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EXAMINER

MARTIN, ANGELA J

ART UNIT

PAPER NUMBER

1745

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/27/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/712,060

Applicant(s)

FRANK ET AL.

Examiner

Angela J. Martin

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 28-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 28-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/3/06.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This Office Action is responsive to the Amendment/Remarks filed on February 12, 2007.

The Applicant has amended independent claim 28 and has canceled claim 55. The Applicant has informed the Examiner that, "the filing receipt from your office does not indicate any domestic priority data. However, on filing, Applicants submitted form PTO/SB/13/PCT with a request that this application be treated as a continuation of the earlier PCT application, which is a Continuation-in-Part of application number 09/854,362." The filing receipt will be amended with this Office Action. However, the rejection is made final for the following reasons of record.

#### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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2. Claims 28-42, 44-50 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-22 of Frank et al., U.S. Patent No. 6,852,439 in view of Schmid et al., U.S. Pat. No. 6,080,503. Frank et al., teach seals in fuel cells made of an elastomer. Schmid et al., teach conventional seals comprising flexible or rigid epoxy resins (col. 5, lines 20-46).

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 28-54 are rejected under 35 U.S.C. 102(b) as being anticipated by Schmid et al., U.S. Pat. No. 6,080,503.

Rejection of claims 28-54 drawn to an electrochemical cell assembly.

Schmid et al., teach an electrochemical/fuel cell assembly comprising a plurality of separate elements (abstract), at least one groove network element extending through the fuel cell assembly (col. 8, lines 21-32), wherein the seal provides a barrier between at least two of the elements to define a chamber for a fluid for operation of the fuel cell (col. 5, lines 1-6), wherein the seal comprises an elastomeric material (col. 2, lines 27-40); flexible or rigid epoxy resins (col. 5, lines 20-46).

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Response to Arguments***

5. Applicant's arguments filed 2/12/07 have been fully considered but they are not persuasive.

Applicant argues that for anticipation, "a single reference must provide an 'enabling disclosure.'" However, the burden is on the Applicant to show the inability of the reference to have an enabling disclosure.

Applicant argues "Schmid et al. are essentially concerned with providing adhesive bonds between different layers and elements within a fuel cell stack... Schmid et al. is notable for providing little or no detail as to how the stack, including the adhesive layers would be assembled...no specific teaching of first assembling the various components and then, after assembly, somehow supplying the adhesive to the various surfaces, grooves, etc." However, the claims are directed to a product (electrochemical cell). Thus the method of making/assembling the cell is irrelevant to the patentability of the instant claims (see MPEP 2113). Additionally, Schmid et al. teach "with reference again to FIG. 2, fluid manifold openings 30, 32, and 36 are arranged inside the electrochemically active area of MEA 5. Adhesive bonding agent 50, used for sealing the gas spaces, runs along the outer edges of MEA 5. However, in a further embodiment (not shown) it is also possible to arrange the openings outside the electrochemically active area of MEA 5 (by analogy with FIG. 5 of European Patent Publication EP 0 604 683 A1 which is incorporated herein by reference). In such an embodiment, the adhesive bonding

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agent used for sealing the gas spaces may run not along the outer edge of the MEA, but along the edge of the electrochemically active area of the MEA. MEA 5 is thus adhesively joined with the adjacent separator plates to form a consolidated mechanical unit by means of an adhesive. The bond provides a gas and liquid-tight seal.” (col. 6, lines 43-58). Schmid et al. teach “separator plates comprising such channels are commonly referred to as fluid flow field plates. In conventional PEM cells, resilient gaskets or seals are typically provided between the faces of the MEA 5 and each separator plate 11, 12 around the perimeter to prevent leakage of fluid reactant and product streams.” (col. 1, lines 49-54).

Applicant argues that “Schmid et al. do not teach providing a groove network that extends through a plurality of elements...If the grooves in the different elements are to be connected, then the figures would need to show some connecting groove.” However, the Applicant has not defined the type of connection intended (physical connection, electrical connection, operative connection).

The Applicant argues that Schmid et al., “teaches directly away from the present invention” with respect to the adhesive bonding agent. However, according to MPEP 2131.05 [R-5] Nonanalogous >or Disparaging Prior< Art : “Arguments that the alleged anticipatory prior art is nonanalogous art’ or teaches away from the invention’ or is not recognized as solving the problem solved by the claimed invention, [are] not germane’ to a rejection under section 102.” *Twin Disc, Inc. v. United States*, 231 USPQ 417, 424 (Cl. Ct. 1986) (quoting *In re Self*, 671 F.2d 1344, 213 USPQ 1, 7 (CCPA 1982)). See also *State Contracting & Eng ’g Corp. v. Condotte America, Inc.*, 346 F.3d 1057, 1068,

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68 USPQ2d 1481, 1488 (Fed. Cir. 2003) (The question of whether a reference is analogous art is not relevant to whether that reference anticipates. A reference may be directed to an entirely different problem than the one addressed by the inventor, or may be from an entirely different field of endeavor than that of the claimed invention, yet the reference is still anticipatory if it explicitly or inherently discloses every limitation recited in the claims.). A reference is no less anticipatory if, after disclosing the invention, the reference then disparages it. The question whether a reference “teaches away” from the invention is inapplicable to an anticipation analysis. *Celeritas Technologies Ltd. v. Rockwell International Corp.*, 150 F.3d 1354, 1361, 47 USPQ2d 1516, 1522-23 (Fed. Cir. 1998).

Applicant argues “the present invention, in its modular concept intends to form a seal within the module itself by providing a groove network extending through the module.” However, “a groove network extending through the module” is not recited in the present claims; and a modular concept of forming a seal having an extended seal is not recited in the claims.

Applicant argues “there is simply no teaching of ‘including at least one filling port for the groove network.’” However, by observing Fig. 1a, 1b, 1c, 1d, the fluid openings operate as fluid filling ports as the fluid passes through the openings.

Applicant argues “nor is there any disclosure of a ‘seal within each groove network that has been formed in place after assembly of the separate elements.’” However, the method step of “that has been formed in place” does not add anything to the patentability of the claim since this is a product claim and not a method claim.

Applicant argues "Schmid et al. accept the conventional approach of providing individual seals." However, each individual seal when taken as a sealing arrangement as a whole provides the necessary structure to meet the claimed requirement of forming an interconnected (operatively/electrically) network.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

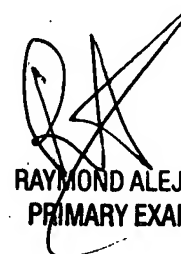
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela J. Martin whose telephone number is 571-272-1288. The examiner can normally be reached on Monday-Friday from 9:00 am to 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJM



RAYMOND ALEJANDRO  
PRIMARY EXAMINER